S21ME8/S21ME8F

Features

- 1. High repetitive peak OFF-state voltage (VDRM: MIN. 800V)
- 2. Low minimum trigger current (IFT : MAX. 3mA)
- 3. Internal insulation distance : 0.5mm or more
- 4. Long creepage distance type (Creepage distance : 8mm or more)
- 5. Built-in zero-cross circuit
- 6. High isolation voltage between input and output (Viso : 5 000Vrms)
- 7. Recoginized by UL file No. E64380

Approved by BSI, No. 6690, No. 7421

Approved by SEMKO, No. 9843099

Approved by DEMKO, No. 308207

*DIN-VDE 0884 approved type is also available as an option

(S21ME8Y/S21ME8FY)

Approved by VDE, No. 77294

Applications

1. For triggering medium/high power triac

Abs	ngs	(Ta=25°C)			
Parameter		Symbol	Rating	Unit	
Input	*1 Forward current	IF	15	mA	
	Reverse voltage	VR	6	V	
Output	*1 RMS ON-state current	Іт	0.1	Arms	
	Peak one cycle surge current	Isurge	*3 1.2	A	
	Repetitive peak OFF-state voltage	VDRM	800	V	
Operating temperature		Topr	-30 to +100	°C	
Storage temperature		Tstg	-55 to +125	°C	
*2 Isolation voltage		Viso	5 000	Vrms	
Soldering temperature		TSOL	*4 260	°C	

*1 The derating factors of absolute maximum ratings due to ambient temperature are shown in Fig.1 to 2.

*2 40 to 60%RH, AC for 1min, f=60Hz.

*3 50Hz, sine wave.

*4 For 10s.

High Repetitive Peak OFF-State Voltage Type **Phototriac Couplers**

Outline Dimensions



■ Electro-optical Characteristics (Ta=25°C										
Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit			
Input -	Forward voltage	VF	IF=6mA	-	1.2	1.4	V			
	Reverse current	Ir	V _R =3V	-	-	10-5	Α			
Output -	Repetitive peak OFF-state current	Idrm	VDRM=Rated	-	-	10-6	Α			
	ON-state voltage	VT	IT=0.1A	-	1.7	3.0	V			
	Holding current	Ін	VD=6V	0.1	-	3.5	mA			
	Critical rate of rise of OFF-state voltage	dV/dt	V _{DRM} =1/√2·Rated	500	_	-	V/µs			
Transfer - charac teristics -	Zero-cross voltage	Vox	IF=6mA, Resistance load	-	_	20	V			
	Minimum trigger current	Ift	$V_D=6V, R_L=100\Omega$	-	_	3.0	mA			
	Isolation resistance	Riso	DC=500V, 40 to 60%RH	5×10-10	1×10 ⁻¹¹	-	Ω			
	Turn-on time	ton	VD=6V, RL=100Ω, IF=6mA	-	-	50	μs			

Fig.1 RMS ON-state Current vs. Ambient Temperature



Fig.3 Forward Current vs. Forward Voltage



Fig.2 Forward Current vs. Ambient Temperature



Fig.4 Minimum Trigger Current vs. Ambient Temperature



Fig.5 Relative Repetitive Peak OFF-state Voltage vs. Ambient Temperature







Fig.9 Turn-on Time vs. Forward Current



Fig.6 ON-state Voltage vs. Ambient Temperature



Fig.8 Repetitive Peak OFF-state Current vs. Ambient Temperature



Fig.10 Zero-cross Voltage vs. Ambient Temperature







Fig.13 Reflow Soldering

Only one time soldering is recommended within the temperature profile shown below.



Fig.12 ON-state Current vs. ON-state Voltage



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